

III. CLAIM AMENDMENTS

1. (Currently Amended) An antenna arrangement of a mobile station, said arrangement comprising:

- a planar antenna including a ground plane and a planar radiator element which is disposed substantially parallel to the ground plane with a space therebetween, and

- a printed wired board which is located substantially parallel to said ground plane and said radiator element, wherein the ground plane covers a first area on the printed wired board and the radiator element covers a second area on the printed wired board, ~~which third area includes a number of components on a surface of the printed wire board,~~

wherein:

- the arrangement comprises a layer of low reluctance material which layer is substantially parallel to the printed wired board and covers a third area on the printed wired board, which third area includes a number of components on a surface of the printed wire board,

- said layer of low reluctance material is so located that the third area on the printed wired board is at least in part outside said first and second areas on the printed wired board, and

the space between the radiator element and the ground plane is substantially air, thus forming an air gap.

2. (Original) An antenna arrangement according to claim 1, characterized in that the low reluctance material covers a high

intensity RF current area on the printed wired board for reducing the RF current intensity on said area.

3. (Original) An antenna arrangement according to claim 1, characterized in that the low reluctance material is flexible ferrite sheet.

4. (Original) An antenna arrangement according to claim 1, wherein the mobile station includes a display unit, characterized in that the layer of low reluctance material is located between the display unit and the printed wired board.

5. (Previously Presented) An antenna arrangement according to claim 4, characterized in that the display unit comprises a light guide, and said layer of low reluctance material is attached to said light guide.

6. (Original) An antenna arrangement according to claim 1, characterized in that said low reluctance material is attached to the ground plane.

7. (Cancelled)

8. (Original) An antenna arrangement according to claim 1, characterized in that the ground plane is formed of a conducting layer of the printed wired board.

9. (Original) An antenna arrangement according to claim 8, characterized in that said the ground plane is formed of the conductive layer of the printed wired board which is nearest to the radiator element.

10. (Original) An antenna arrangement according to claim 1, characterized in that the planar antenna is located at the end of

the printed wired board, and the low reluctance material is located at a distance from said end of the printed wired board.

11. (Original) An antenna arrangement according to claim 1, characterized in that said printed wired board connects said planar antenna to other electronics of the mobile station.

12. (Previously Presented) A mobile station, comprising:

- a planar antenna including a ground plane and a planar radiator element which is disposed substantially parallel to the ground plane with a space therebetween, and

- a printed wired board which is substantially parallel to said ground plane and said radiator element, wherein the ground plane covers a first area on the printed wired board and the radiator element covers a second area on the printed wired board,

wherein:

- the mobile station further comprises a layer of low reluctance material which layer is substantially parallel to the printed wired board and covers a third area on the printed wired board, which third area includes a number of components on a surface of the printed wire board,

said layer of low reluctance material is so located that the third area on the printed wired board is at least in part outside said first and second areas of the printed wired board, and

the space between the radiator element and the ground plane is substantially air, thus forming an air gap.

13. (Currently Amended) An antenna arrangement mobile station according to claim 12, characterized in that the low reluctance

material covers a high intensity RF current area on the printed wired board for reducing the RF current intensity on said area.

14. (Original) A mobile station according to claim 12, characterized in that the low reluctance material is flexible sheet of ferromagnetic material.

15. (Original) A mobile station according to claim 12, wherein the mobile station includes a display unit, characterized in that the layer of low reluctance material is located between the display unit and the printed wired board.

16. (Original) A mobile station according to claim 12, characterized in that the planar antenna is located at the end of the printed wired board, and the low reluctance material is located at a distance from said end of the printed wired board.

17. (Original) A mobile station according to claim 12, characterized in that said printed wired board connects said planar antenna to other electronics of the mobile station.

18. (New) An antenna arrangement of a mobile station, said arrangement comprising:

- a planar antenna including a ground plane and a planar radiator element which is disposed substantially parallel to the ground plane with a space therebetween, and

- a printed wired board which is located substantially parallel to said ground plane and said radiator element, wherein the ground plane covers a first area on the printed wired board and the radiator element covers a second area on the printed wired board,

wherein:

- the arrangement comprises a layer of low reluctance material which layer is substantially parallel to the printed wired board and covers a third area on the printed wired board,
- said layer of low reluctance material is so located that the third area on the printed wired board is at least in part outside said first and second areas on the printed wired board and spans most of the width of the printed wired board.

19. (New) A mobile station, comprising:

- a planar antenna including a ground plane and a planar radiator element which is disposed substantially parallel to the ground plane with a space therebetween, and
- a printed wired board which is substantially parallel to said ground plane and said radiator element, wherein the ground plane covers a first area on the printed wired board and the radiator element covers a second area on the printed wired board,

wherein:

- the mobile station further comprises a layer of low reluctance material which layer is substantially parallel to the printed wired board and covers a third area on the printed wired board,
- said layer of low reluctance material is so located that the third area on the printed wired board is at least in part outside said first and second areas of the printed wired board and spans most of the width of the printed wired board.

20. (New) An antenna arrangement of a mobile station, said arrangement comprising:

- a planar antenna including a ground plane and a planar radiator element which is disposed substantially parallel to the ground plane with a space therebetween, and
- a printed wired board which is located substantially parallel to said ground plane and said radiator element, wherein the ground plane covers a first area on the printed wired board and the radiator element covers a second area on the printed wired board,

wherein:

- the arrangement comprises a layer of low reluctance material which layer is substantially parallel to the printed wired board and covers a third area on the printed wired board,
- said layer of low reluctance material is so located that the third area on the printed wired board is at least in part outside said first and second areas on the printed wired board and coincides with most of an area covered by a display attached to the printed wired board.

21. (New) A mobile station, comprising:

- a planar antenna including a ground plane and a planar radiator element which is disposed substantially parallel to the ground plane with a space therebetween, and
- a printed wired board which is substantially parallel to said ground plane and said radiator element, wherein the ground plane

covers a first area on the printed wired board and the radiator element covers a second area on the printed wired board,

wherein:

- the mobile station further comprises a layer of low reluctance material which layer is substantially parallel to the printed wired board and covers a third area on the printed wired board,

- said layer of low reluctance material is so located that the third area on the printed wired board is at least in part outside said first and second areas of the printed wired board and coincides with most of an area covered by a display attached to the printed wired board.

22. (New) An antenna arrangement of a mobile station, said arrangement comprising:

- a planar antenna including a ground plane and a planar radiator element which is disposed substantially parallel to the ground plane with a space therebetween, and

- a printed wired board which is located substantially parallel to said ground plane and said radiator element, wherein the ground plane covers a first area on the printed wired board and the radiator element covers a second area on the printed wired board,

wherein:

- the arrangement comprises a layer of low reluctance material which layer is substantially parallel to the printed wired board, covers a third area on the printed wired board and is located

between a display attached to the printed wired board and the surface of the printed wired board to which the display is attached,

- said layer of low reluctance material is so located that the third area on the printed wired board is at least in part outside said first and second areas on the printed wired board.

23. (New) A mobile station, comprising:

- a planar antenna including a ground plane and a planar radiator element which is disposed substantially parallel to the ground plane with a space therebetween, and

- a printed wired board which is substantially parallel to said ground plane and said radiator element, wherein the ground plane covers a first area on the printed wired board and the radiator element covers a second area on the printed wired board,

wherein:

- the mobile station further comprises a layer of low reluctance material which layer is substantially parallel to the printed wired board, covers a third area on the printed wired board and is located between a display attached to the printed wired board and the surface of the printed wired board to which the display is attached,

- said layer of low reluctance material is so located that the third area on the printed wired board is at least in part outside said first and second areas of the printed wired board.